C. METHODS, ACTIVITIES, TIMELINE

Project Title: ZipGrow Tower Closed-System Watering Retrofit Project

Project Deliverables/Results

- Design, test, and implement modular closed-system watering retrofits for 300 ZipGrow towers across three Los Angeles locations
- Reduce water consumption by 65% while increasing production capacity by 30%
- Develop open-source documentation and training materials for system replication
- Create 20 additional growing spaces in underutilized community areas

Implementation Timeline

Phase 1: Research & Design (July-August 2025)

- Conduct water usage assessment across all existing tower systems
- Design prototype closed-system units compatible with ZipGrow towers
- Test 5 prototype designs with different crops to optimize performance
- Finalize component list and sourcing for full implementation

Phase 2: Material Acquisition & Team Development (September-October 2025)

- Purchase materials for initial 100 retrofit kits (pumps, reservoirs, sensors)
- Hire and train 3 community technicians from our workforce program
- Establish performance metrics and monitoring systems
- Develop installation protocols and maintenance schedules

Phase 3: Initial Implementation (November-December 2025)

- Install first 100 systems at Pico Union location
- Document installation process for training purposes
- Monitor system performance, water usage, and crop yields
- Refine design based on initial performance data

Phase 4: Full Deployment (January-March 2026)

- Deploy 100 systems at South Central LA location
- Deploy 100 systems at Boyle Heights location
- Implement crop-specific nutrient management protocols
- Establish 20 new growing spaces in previously unusable areas

Phase 5: Documentation & Community Engagement (April-June 2026)

- Analyze performance data across all systems and locations
- Develop comprehensive open-source implementation guide
- Conduct 3 community training workshops (1 per location)
- Create digital resources for system replication by other urban farms

Monitoring & Evaluation Methods:

- Weekly water consumption measurements compared to baseline
- Monthly yield measurements by crop type and tower
- Quarterly community feedback sessions
- Documentation of system failures and solutions
- Cost-benefit analysis of retrofit implementation

Timeline & Activities Template

(completion by June, 2026)

Phase 1: July - August 2025

- Conduct water usage assessment across all tower systems / July 2025 / $1,200
- Design 5 prototype closed-system units / July 2025 / $2,500
- Test prototypes with different crops / August 2025 / $1,800
- Finalize component specifications and sourcing plan / August 2025 / $500

Phase 2: September - October 2025

- Purchase materials for initial 100 retrofit kits / September 2025 / $12,500
- Hire 3 community technicians from workforce program / September 2025 / $7,500
- Train technician team on installation procedures / October 2025 / $1,200
- Establish monitoring systems and performance metrics / October 2025 / $800

Phase 3: November - December 2025

- Install first 100 systems at Pico Union location / November 2025 / $4,000
- Document installation process and create training materials / November 2025 / $1,000
- Monitor initial system performance / November-December 2025 / $1,500
- Refine design based on performance data / December 2025 / $2,000

Phase 4: January - March 2026

- Purchase materials for 200 additional systems / January 2026 / $24,000
- Deploy 100 systems at South Central LA location / January-February 2026 / $4,000
- Deploy 100 systems at Boyle Heights location / February-March 2026 / $4,000
- Establish 20 new growing spaces in community areas / March 2026 / $3,000

Phase 5: April - June 2026

- Analyze comprehensive performance data / April 2026 / $1,500
- Develop open-source implementation guide / April-May 2026 / $2,000
- Conduct 3 community training workshops / May 2026 / $1,800
- Create digital resources for system replication / June 2026 / $1,500